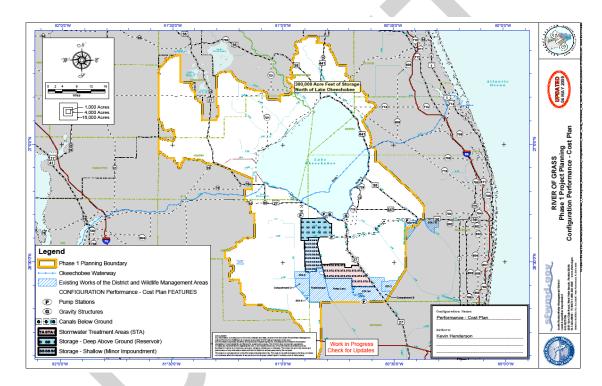
## Performance Cost Plan (PCP)

## **Kevin Henderson**

This configuration focused primarily on meeting set performance standards derived from the performance maps that were provided during the public workshops, while striving to balance that stated performance with reasonable configuration costs. Utilizing the performance maps the configuration centered on 300,000 acre-feet of storage north of Lake Okeechobee and 550,000 acre-feet south of Lake Okeechobee. The storage south of Lake Okeechobee is to be divided between both deep and shallow storage.

The configuration also provides water quality treatment by locating a Stormwater Treatment Area (STA) on Compartment A of the Talisman property.



## **Major Components:**

- North Deep Storage 300,000 acre-feet
- South Deep Storage 460,000 acre-feet
- South Shallow Storage 90,000 acre-feet
- South Stormwater Treatment Area 32,000 net acres of treatment area

General Description of How Water Flows Through System/Operational Intent: Water north of Lake Okeechobee is pumped into the North Reservoir and released by gravity when this water is needed by Lake Okeechobee or the Everglades. Water leaving Lake Okeechobee will be directed to the deep storage reservoir south of Lake Okeechobee. From there it will gravity flow through the shallow storage reservoir that is allowed to go dry and ultimately through the treatment area located on Compartment A of the Talisman parcel prior to entering the northern portion of the Everglades via pump flow.

## **Total Acreage Identified:**

- 22,500 acres north of Lake Okeechobee
- 91,500 acres south of Lake Okeechobee

Of the total acreage identified 37,263 acres is in public ownership and the remaining 76,737 acres would need to be acquired.

**Hydrologic Performance:** Achieved 94% (overall result of five (5) months total in Lake-triggered high discharges during the 41-year period of record) reduction in Lake-triggered high discharges to the Northern Estuaries. Received a 81% standard score for Lake Okeechobee Stage Envelope Standard Score Above. Received a 92% standard score for Everglades demand target delivered and a 91% standard score for dry season Everglades demand target delivered.

**Water Quality Performance:** This configuration requires an additional 0 to 8,700 acres of Stormwater Treatment Area depending on inflow phosphorous concentration from Lake Okeechobee, whether deep storage provides treatment, and whether the shallow storage features are allowed to go dry.

**Environmental / Ecological Advantages or Benefits**: This configuration incorporates deep storage, shallow storage and treatment areas and seeks to strike a balance between benefits and costs.

**Environmental / Ecological Impacts or Concerns**. Effects of reservoirs deeper than 12 feet on the ambient water quality.

Increased Spatial Extent of Shallow Storage/Treatment (≤ 4 feet water depth): 61,500 total acres. Results of relative landscape viability comparisons between the alternative configurations (based on maintenance of minimum depths) indicate that this configuration fell in the moderate range.

**Economic / Recreational Advantages or Benefits:** This configuration is intended to minimize community impacts and provides system enhancements to benefit the Everglades and estuaries while attempting to balance benefits and costs.

**Economic / Recreational Impacts or Concerns:** Results of relative sugarcane production comparison between alternative configurations indicated that this configuration fell in the medium to high range.

**Major Infrastructure Impacts:** Power transmission lines, railroad lines, roadways, bridges, and urban areas will be impacted and will need to be replaced. Pump stations, control structures and additional canals will need to be constructed to offset impacts to local 298 drainage districts.

Operation and Management (O&M) Considerations (if any): This configuration contains a substantial amount of embankment (primarily  $\leq 9$  feet height) that will have to be maintained.

**Uncertainty Concerns:** Uncertainties related to water quality performance for shallow storage and reservoirs.

